

REMARKS

At the outset, applicants would like to thank Examiner Kifle for this time and consideration of the present application at the interview of June 22, 2004 with the undersigned attorney. At the interview, the issues raised in the outstanding Official Action were discussed.

In the outstanding Official Action, claims 40-53 were rejected under 35 USC §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants believe that the present amendment obviates this rejection.

Claims 40-53 have been canceled and new claims 54-72 have been added. Applicants believe that new claims 54-72 have been drafted in a manner so that they address and obviate the formal matters raised by the Official Action.

In particular, the claims have been drafted to provide values of "n". In independent claims 54, 70, and 72, the value of "n" ranges from 1 to 50. Support for this change may be found in the present specification at page 5, line 35.

The "GP" group has also been amended. Hydrogen has been excluded from the "GP" group. Moreover, in order to further clarify the oxycarbonyl group ROCO and the acyl group RCO, the meaning of the substituent group R has been amended.

Support for this modification may be found at page 21 in the present specification.

As to the term "biotin", the term has been replaced by "biotinyle" to reflect the point of attachment.

The recitation, wherein the "GP-N" entity forms an "HN₂⁺" entity, is no longer recited in the claims.

Regarding the objection to the phrase "an alkyl group is cyclic structure", the claims have been drafted to recite "an aryl group is cyclic structure...". As a result, applicants believe that this rejection has been obviated.

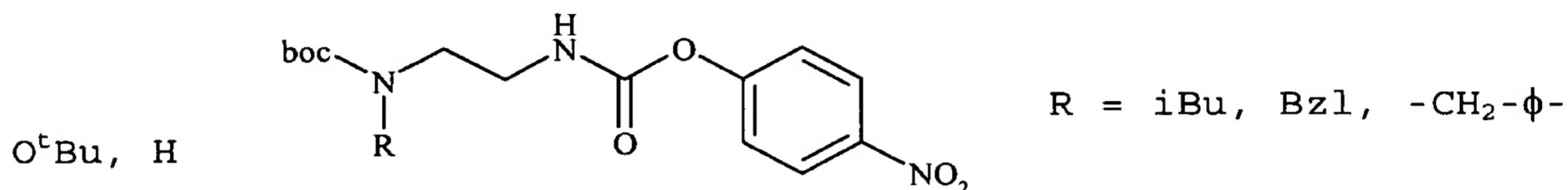
The claims have also been drafted in a manner so that substituent group has been clarified. Applicants also believe that the claims have been drafted in a manner so that proper antecedent basis has been provided for further recitations found in dependent claims.

Finally, the claims have been drafted in a manner so that the groups R², R⁴, and R⁵ have been defined

In conjunction with the present amendment, applicants submit herewith an Information Disclosure Statement. The Information Disclosure Statement cites to the following articles: Richter et al. (1998); Neel et al. (1996); Conroy et al. (1997); Shioiri et al. (1972); Burgess et al. (1997); US 3,637,811; Corrall et al. (1977); Martinez et al. (1982); and Kim et al. (1996). However, in view of the provisos set forth in the

claimed invention, applicants do not believe that any of the publications disclose or suggest the claimed invention.

Indeed, Kruijzer et al. (1997) look at the synthesis of ureapeptoid peptidomimetics, and more particularly describe the following compounds:



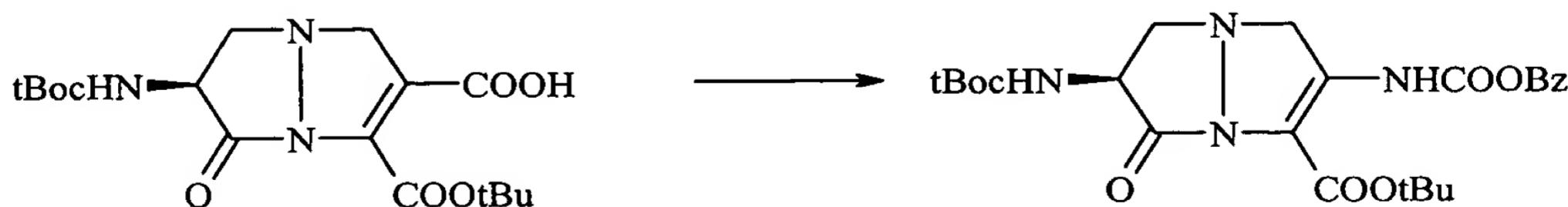
However, these compounds are not included in formula (I bis).

Richter et al. (1998) describe the solid-phase synthesis of primary amines and carbamates by Curtius degradation of carboxylic acids. This synthesis is carried out on a resin according to the following reaction scheme:



However, this article does not describe or suggest a compound of formula (I bis) according to the present invention.

Neel et al. (1996) describe the synthesis of a 3-keto bicyclic pyrazolidinone using a Curtius rearrangement. More particularly, this article describes the following reaction:

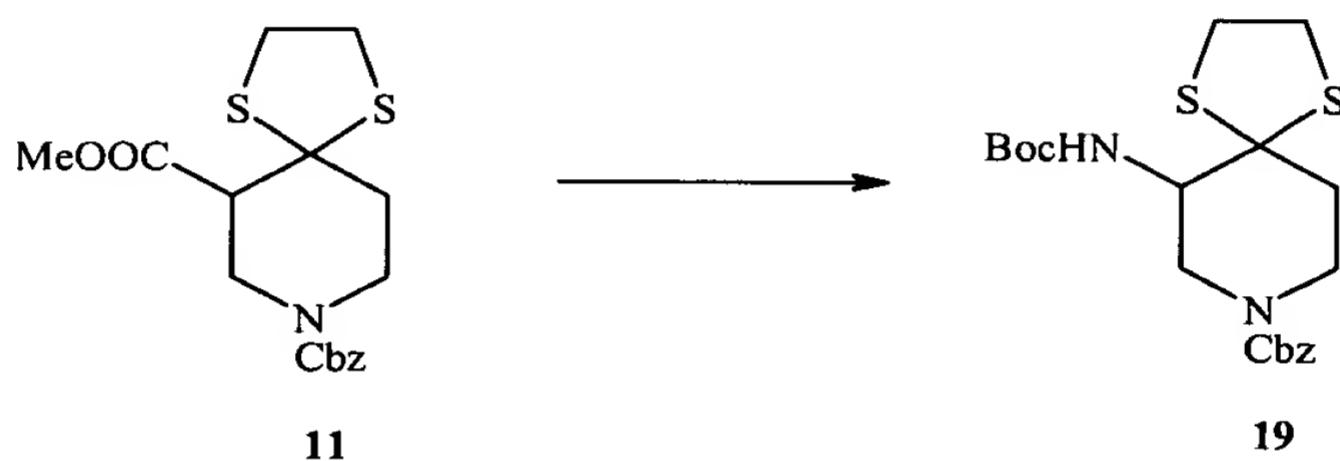


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Thus, the publication does not describe a compound of formula (I bis) according to the present invention.

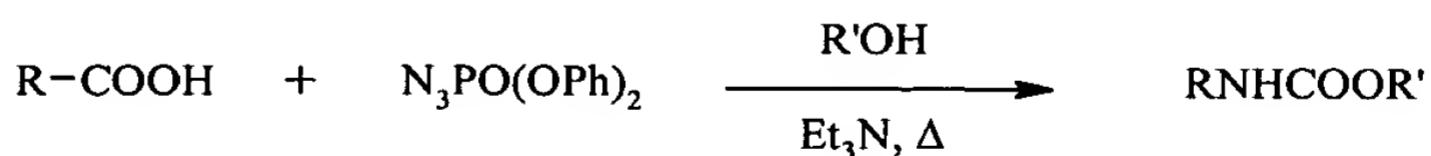
Conroy et al. (1997) describes a new class of inhibitors for cysteine proteases. More particularly, this article describes the following reaction:



The compound (10) is a carbamate and, thus, this article does not describe a compound of formula (I bis) according to the present invention.

Shioiri et al. (1972) discuss the use of diphenylphosphoryl azide (DPPA), particularly as a reagent in Curtius rearrangement.

This article describes the following reaction:

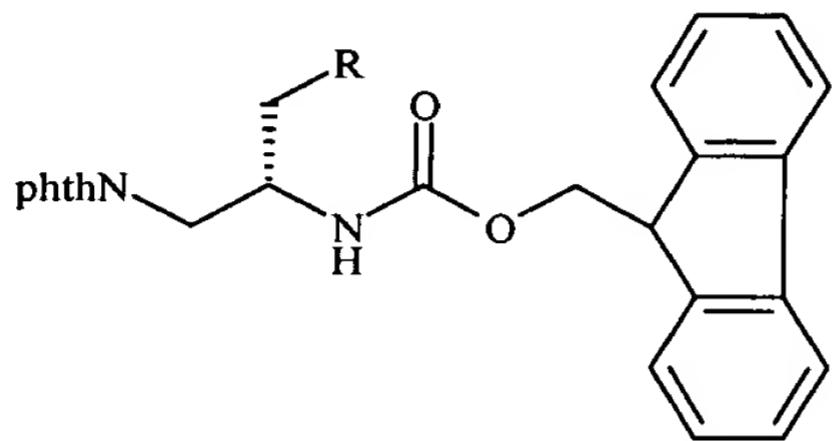


which corresponds to the conversion of carboxylic acids into urethanes.

Thus, the compounds described in this article are

different from the compounds of formula (I bis) according to the present invention.

Burgess et al. (1997) relate to the solid phase syntheses of oligoureas and describes particularly the compounds 15a and 15b having the following formula:

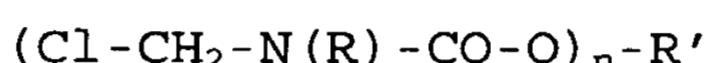


R may represent a CO_2tBu group (compound 15a) or a group $(\text{CH}_2)_4\text{NHBOC}$ (compound 15b).

The above compounds 15a and 15b are not included in formula (I bis) according to the present invention, as the above-mentioned definition of X is not included in the definition of the compounds of the invention on the one hand, and, it is not possible, in the compounds of the invention, that R^1 (the one bound to N atom) and Y form a cycle.

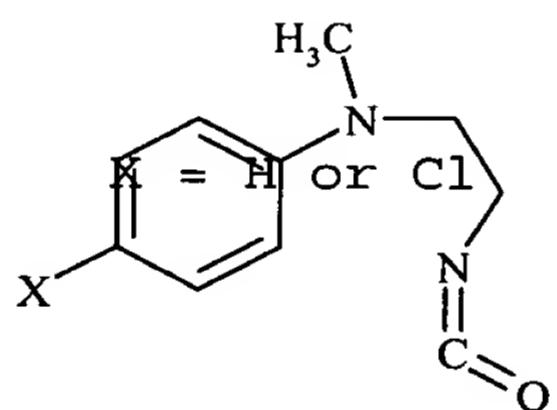
In conclusion, the compounds of formula (I bis) of the invention are novel in view of Burgess et al.

US 3,637,811 relates to the production of organic isocyanates, and for example describes (claim 1) N-hydrocarbyl-N-isocyanatomethyl-carbamic acid esters of formula:



As this document relates to isocyanates, the compounds of the present invention (carbamic acid derivatives) are not disclosed or suggested in view of this patent.

Corral et al. (1977) describe the use of isocyanates for the synthesis of benzodiazepines. The used isocyanates have the following formula:



As this document relates to isocyanates, the compounds of the present invention (carbamic acid derivatives) do not disclose or suggest the claimed invention.

Martinez et al. (1982) discuss the use of N-nitrosocarbamates for the regioselective synthesis of N-nitrosoureas, and does not describe any compound of formula (I bis) according to the present invention.

Kim et al. (1996) discuss the solid-phase synthesis of oligoureas with monomers containing a function -N₃, and does not describe any compound of formula (I bis) according to the present invention.

Claims 40, 47, 50, 52 and 53 were rejected under the judicially created doctrine as allegedly being drawn to an improper Markush group. This rejection is respectfully traversed.

Applicants submit that the Official Action fails to establish why the claims are not in condition for allowance. In imposing the Improper Markush Rejection, the Official Action contends that applicants do not point to a community of chemical or physical characteristics, which justify their inclusion in a common group, that such inclusion is not repugnant to principles of scientific classification. However, Applicants believe that the Patent Office improperly places the burden on Applicants.

The Examiner is respectfully reminded that it is improper for the Patent Office to refuse to examine that which Applicants regard as their invention, unless the subject matter in the claims lack unity of invention. *In re Harnish*, 631 F2d 716, 206 USPQ 300 (CCPA 1980); and *Ex parte Hozumi*, 3 USPQ 2d 1059 (BPAI 1984). §803.02 of the MPEP broadly states that the unity of invention exists for compounds included within a Markush group

that (1) share a common utility, and (2) share a substantial structural feature disclosed as being essential to that utility.

The Examiner fails to provide any evidence that the claims directed to the stable activated derivatives of carbamic acid lack unity of invention. Moreover, the Official Action does not show that the claims lack a common utility or do not share a substantial structural feature. Rather, the Official Action persists in making the unsupported allegation that the claims are not proper. As a result, applicants believe that the Markush rejection is improper and must be withdrawn.

In view of the present amendment and the foregoing remarks, therefore, applicants believe that the present application is in condition for allowance. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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